

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for producing a filled skutterudite-based alloy containing a composition of RT_4Sb_{12} , comprising:

melting alloy raw material comprising a rare earth metal R that is at least one species selected from among La, Ce, Pr, Nd, Sm, Eu and Yb, a transition metal T that is at least one species selected from among Fe, Co, Ni, Os, Ru, Pd, Pt and Ag, and metallic antimony Sb at a temperature of 800 to 1,800°C to form a melt; and

rapidly quenching the melt at a cooling rate of 5×10^2 to 3×10^3 °C/second, as measured within a range of the temperature of the melt to 800°C through strip casting to form a solidified alloy containing a filled skutterudite phase in an amount of at least 95 mass%; and

collecting the solidified alloy into a receiving box.

2. (canceled).

3. (previously presented): The method according to claim 1, wherein the alloy raw material is melted in an inert gas atmosphere at a pressure higher than atmospheric pressure of 0.1 MPa and not higher than 0.2 MPa.

4. (previously presented): The method according to claim 1, wherein the solidified product comprises alloy strips having a thickness of 0.1 to 2.0 mm.

5. (previously presented): A filled skutterudite-based alloy produced through the method according to claim 1, that contains a filled skutterudite phase in an amount of at least 95 mass%.

6. (previously presented): The filled skutterudite-based alloy according to claim 5, wherein it contains a filled skutterudite phase in an amount of at least 95 vol.% and further contains a phase, other than the filled skutterudite phase, having a maximum grain diameter of 10 μm or less.

7. (previously presented): The filled skutterudite-based alloy according to claim 5, wherein it contains oxygen, nitrogen and carbon in a total amount of 0.2 mass% or less.

8. (previously presented): A thermoelectric conversion element fabricated using the filled skutterudite-based alloy according to claim 5.

9-10. (canceled).

11. (previously presented): The method according to claim 1, wherein the receiving box is cooled at a rate of 2 °C/second at a temperature within the range of from 700°C to 500°C.